

present know it, appears to be best divisible into three sections for faunistic purposes; these are:—

1. *The Basin of the Shiré* below the cataracts, the fauna of which is probably identical with that of the Lower Zambesi. Katunga, where the navigation of the Shiré ends, is about 500 feet above the sea-level.

2. *The Shiré Highlands*, in parts of which the hills run up to an elevation of 8000 feet, and where we should accordingly expect to find a considerable modification of the fauna.

3. *The Basin of Lake Nyassa*, where the lake itself lies at an elevation of about 1500 feet above the sea-level. The adjoining ranges on the western side, which is alone in British territory, will probably be found to possess a fauna nearly allied to that of the Shiré Highlands.

Mr. G. A. BOULENGER then read the following paper "On the State of our Knowledge of the Reptiles and Batrachians of British Central Africa."

As may well be expected, our information respecting the herpetological fauna of this district is at present very meagre. The only specimens with precise localities in the British Museum are derived from five sources, viz.:—(1) 15 specimens from the Shiré Valley, purchased in 1864; (2) 11 specimens from the Blantyre Mission Station, on the Shiré highlands, and Lake Nyassa, collected by Mr. F. A. Simons, purchased in 1877; (3) 5 specimens from Lake Nyassa, collected by Mr. J. B. Thelwall, purchased in 1877; (4) 5 specimens from Lake Nyassa, purchased of Mr. Cutter in 1877; (5) 7 specimens from Lake Nyassa, purchased of the Universities' Mission in 1888.

Most of the Snakes have been noticed by Dr. Günther in a recent paper on the Snakes of Tropical Africa (Ann. & Mag. N. H. [6] i. 1888, p. 322), in which two new species from Lake Nyassa and one from the Shiré are described, and most of the Lizards and Batrachians will be found mentioned in the British Museum Catalogues (1882–1887). There are in addition a number of specimens in the Museum which are labelled "Zambesi," or "Zambesi Expedition," from Sir J. Kirk's collections, many of which were procured in the district with which we are at present dealing. A report on these Reptiles was published by Dr. Günther in the 'Proceedings' of this Society for 1864 (p. 303). Owing to the absence of precise information as to localities, I have abstained from mentioning them in the list appended to this communication. Other works of special importance in the study of this fauna are Peters's 'Reise nach Mossambique,' vol. iii. Reptiles, 1882, and Bocage's numerous papers in the "Jornal de Sciencias" of the Academy of Lisbon. No doubt many of the Reptiles described from the Portuguese possessions of South-west Africa will eventually be rediscovered to the East, our knowledge being already sufficiently advanced to show in a striking manner the homogeneity of the herpetological fauna of Southern tropical Africa.

In the following list I have enumerated all the Reptiles and Batrachians of British Central Africa of which specimens with localities are preserved in the British Museum.

LIZARDS.

1. HEMIDACTYLUS MABOUIA, Mor. ; Cat. Liz. i. p. 122.
Shiré Valley.
2. PACHYDACTYLUS OSHAUGHNESSYI, Blgr. ; Cat. Liz. i. p. 204, pl. xvi. fig. 3.
Lake Nyassa (*Thehwall*; *Simons*).
3. VARANUS ALBIGULARIS, Daud. ; Cat. Liz. ii. p. 308.
Lake Nyassa.
4. MONOPELTIS SPHENORHYNCHUS, Ptrs. ; Cat. Liz. ii. p. 455.
Shiré Valley.
5. NUCRAS TESSELLATA, Smith ; Cat. Liz. iii. p. 52.
Lake Nyassa.
6. LYGOSOMA SUNDEVALLI, Smith ; Cat. Liz. iii. p. 307.
Lake Nyassa (*Thehwall*).
7. ABLEPHARUS WAHLBERGI, Smith ; Cat. Liz. iii. p. 350.
Lake Nyassa (*Thehwall*).

SNAKES.

8. TYPHLOPS OBTUSUS, Ptrs.
Typhlops obtusus, Peters, Mon. Berl. Ac. 1865, p. 260, pl.—. fig. 2, and Reise n. Mossamb. iii. p. 95 (1882).
Shiré Valley.
9. SIMOCEPHALUS NYASSÆ, Gthr.
Simocephalus nyassæ, Günther, Ann. & Mag. N. H. (6) i. 1888, p. 328.
Lake Nyassa.
10. PROSYMNA AMBIGUA, Bocage.
Prosymna ambigua, Bocage, Journ. Sc. Lisb. iv. 1873, p. 218.
Shiré Valley.
11. CHLOROPHIS IRREGULARIS, Leach.
Ahætulla irregularis, Günth. Cat. Col. Sn. p. 152 (1858).
Philothamnus irregularis, Bocage, Journ. Sc. Lisb. ix. 1882, p. 4.
Ahætulla shirana, Günth. Ann. & Mag. N. H. (6) i. 1888, p. 326.
Shiré Valley, Blantyre Mission Station (*Simons*).

12. PHILOTHAMNUS SEMIVARIEGATUS, Smith.

Ahætulla semivariiegata, Günth. Proc. Zool. Soc. 1864, p. 307.

Philothamnus punctatus, Peters, Mon. Berl. Ac. 1866, p. 889, and Reise n. Mossamb. iii. p. 129, pl. xix. A. fig. 1 (1882); Bocage, l. c. p. 14.

Shiré Valley (*Kirk*); L. Nyassa (*Universities' Mission*).

13. AMPHIOPHIS¹ NOTOTÆNIA.

Coronella nototænia, Günth. Proc. Zool. Soc. 1864, p. 309, pl. xxvi. fig. 1, and Ann. & Mag. N. H. (6) i. 1888, p. 333.

Ablabes hildebrandtii, Peters, Mon. Berl. Ac. 1878, p. 205, pl. ii. fig. 6; Fischer, Jahrb. Hamb. Wiss. Anst. i. 1884, p. 7.

Tachymenis nototænia, Peters, Reise n. Mossamb. iii. p. 118 (1882).

Lake Nyassa (*Thelwall*); Cape McLearn, L. Nyassa (*Simons*).

14. PSAMMOPHIS SIBILANS, L., var. SUBTÆNIATA, Peters.

Psammodphis sibilans, var. *subtæniata*, Peters, Reise n. Mossamb. iii. p. 121 (1882); Fischer, Jahrb. Hamb. Wiss. Anst. i. 1884, p. 12.

Cape McLearn, Lake Nyassa (*Simons*); L. Nyassa (*Universities' Mission*).

15. PSAMMOPHIS ANGOLENSIS.

Amphiophis angolensis, Bocage, Journ. Sc. Lisb. iv. 1872, p. 82; Peters, Sitzb. Ges. naturf. Fr. 1881, p. 149.

Ablabes homeyeri, Peters, Mon. Berl. Ac. 1877, p. 620.

Dromophis angolensis, Boettg. Ber. Senck. Ges. 1888, p. 55.

Cape McLearn, Lake Nyassa (*Simons*).

16. THELOTORNIS KIRTLANDI, Hallow.

Thelotornis kirtlandii, Peters, op. cit. p. 131, pl. xix. fig. 2.

Lake Nyassa (*Universities' Mission*).

17. LEPTODIRA SEMIANNULATA, Gthr.

Leptodira semiannulata, Günth. Ann. & Mag. N. H. (4) ix. 1872, p. 31.

Lake Nyassa (*Universities' Mission*).

18. CALAMELAPS MIOLEPIS, Gthr.

Calamelaps miolepis, Günth. Ann. & Mag. N. H. (6) i. 1888, p. 323.

Cape McLearn, L. Nyassa (*Simons*).

¹ *Amphiophis*, Smith, is closely allied to *Psammodphyllax*. Twelve subequal maxillary teeth, followed by an enlarged, grooved tooth; mandibular teeth subequal. Nasal semidivided; frontal narrow. Eye moderate, with round pupil. Scales smooth, with apical pits. Ventrals rounded. Tail moderate; subcaudals in two rows.

19. *URIECHIS CAPENSIS*, Smith.

Elapomorphus capensis, Smith, Ill. Zool. S. Afr., Rept., App. p. 16 (1849).

Uriechis capensis, Jan, Icon. Gén. Ophid. livr. 15, pl. i. fig. 5 (1866); Peters, Reise n. Mossamb. iii. p. 112 (1882); Günth. Ann. & Mag. N. H. (6) i. 1888, p. 324.

Cape McLearn, L. Nyassa (*Simons*).

20. *URIECHIS LUNULATA*, Ptrs.

Uriechis lunulatus, Peters, Mon. Berl. Ac. 1854, p. 623, & op. cit. p. 113, pl. xviii. fig. 2; Günth. l. c. p. 324.

Lake Nyassa.

21. *NAIA HAIE*, L.

Naia haie, Peters, Reise n. Mossamb. iii. p. 137 (1882).

Shiré Valley.

22. *NAIA NIGRICOLLIS*, Reinh.

Naia nigricollis, Reinh. Dansk. Vid. Selsk. x. 1843, p. 269, pl. iii. figs. 5-7; Peters, op. cit. p. 138, pl. xx. figs. 9 & 10.

Naia mossambica, Peters, Mon. Berl. Ac. 1854, p. 625.

Shiré Valley.

23. *ATRACTASPIS ROSTRATA*, Gthr.

Atractaspis rostrata, Günth. Ann. & Mag. N. H. (4) i. 1868, p. 429, pl. xix. fig. J.

A. bibronii (*non* Smith), Peters, op. cit. p. 142, pl. xix. a. fig. 3.

Lake Nyassa (*Universities' Mission*).

24. *CAUSUS RHOMBEATUS*, Licht.

Causus rhombeatus, Peters, op. cit. p. 144.

Blantyre Mission Station (*Simons*).

BATRACHIANS.

25. *RAPPIA CONCOLOR*, Hallow.; Cat. Batr. Ecaud. p. 124.

Shiré Valley.

26. *MEGALIXALUS FORNASINI*, Bianc.; Cat. Batr. Ecaud. p. 130.

Shiré Valley; Lake Nyassa.

27. *HYLAMBATES MACULATUS*, A. Dum.; Cat. Batr. Ecaud. p. 134.

Shiré Valley.

28. *PHRYNOMANTIS BIFASCIATA*, Smith; Cat. Batr. Ecaud. p. 172.

Shiré Valley.

29. *BREVICEPS VERRUCOSUS*, Rapp; Cat. Batr. Ecaud. p. 177.
Lake Nyassa (*Universities' Mission*).

Mr. EDGAR A. SMITH offered the following remarks on the Molluscan Fauna of British Central Africa:—

So far as I can ascertain, very little seems to be known of the Mollusca of this region, and it is only that part of the country near Lake Nyassa and the lake itself which have been partially investigated. Sir John Kirk was the first to collect in this district, and the specimens he obtained were described by Dr. Dohrn in the 'Proceedings' of this Society for 1865, and by Isaac Lea in the Proc. Acad. Nat. Sci. Philad. for 1864. Some years later Mr. F. A. Simons visited Nyassa and brought home a number of new forms from the lake, which I described in the 'Proceedings' of this Society for 1877. Finally M. Victor Giraud, whilst travelling in the Lake region, also made collections of shells from Nyassa, which were reported upon by M. Bourguignat¹ in 1889. These were obtained at the northern end of the lake, whilst those collected by Sir John Kirk and Mr. Simons were from the southern extremity.

Judging from what we know of the Mollusca of that part of Africa which lies to the east and south of this district, I do not anticipate that many very remarkable forms will be discovered. Doubtless interesting intermediate links connecting some of the large species of *Achatina* may be met with, and a number of new species of other groups of Helicidæ, besides a few forms of freshwater shells, will be found. It is to be hoped, however, that these conjectures may prove incorrect, and that future investigators will be rewarded by the discovery of many, not only new and interesting specific, but also generic forms.

In Capello and Ivens's work 'De Angola á Contra-Costa,' a number of species collected by those travellers has been enumerated by A. Furtado. Although obtained to the south of British Territory, some of them have already been recorded from the Nyassa region; and it is therefore probable that others, eventually, will also be found to range as far northward.

In the following list none of the so-called species characterized by M. Bourguignat are quoted, because, in my opinion, most of them, if not all, are merely varieties of those previously described.

LIST OF THE KNOWN SPECIES OF MOLLUSCA FROM LAKE NYASSA.

1. *Limnæa natalensis*, Krauss.
2. *Physa nyassana*, Smith.
3. — *succinoides*, Smith.
4. *Physopsis africana*, Krauss.

¹ Bull. Soc. Mal. France, 1889, pp. 1-40.